

IN THE CLAIMS:

Please cancel claims 5-10 without prejudice or disclaimer.

1. (Original) In a helicopter of the type having a helicopter turbine engine mounted in the helicopter, the improvement comprising an over-stress protection system including:

data storage means and means for inputting a safe temperature profile for starting the helicopter turbine engine;

means for measuring the actual temperature during start up of the helicopter turbine engine;

comparison means for producing a signal when the actual engine temperature during an engine start up falls outside of the safe temperature profile; and

a source of water and/or alcohol and means for injecting a predetermined amount of water and/or alcohol into the turbine engine during the engine start up procedure in response to said signal.

2. (Original) In a helicopter in accordance with Claim 1 in which the helicopter includes a water tank disposed or mounted in said helicopter.

3. (Original) In a helicopter in accordance with Claim 1 in which a ground source of water and/or alcohol provides the water and/or alcohol for injection into the engine.

4. (Original) In a helicopter of the type having a helicopter turbine engine mounted within the helicopter, the improvement comprising an airborne tank for containing a supply of water and/or alcohol and an inlet for receiving a supply of water and/or alcohol from a ground based source, means for injecting water and/or alcohol into the helicopter turbine engine during a start up procedure while maintaining the airborne tank full of water or alcohol, means for disconnecting the supply of water or alcohol from the ground based source upon completion of the start up procedure and

means for injecting water and/or alcohol from the airborne tank into the turbine engine in response to an engine over-stress during flight operations.

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Original) A helicopter turbine engine over-stress protection system comprising:

a helicopter;

a helicopter turbine engine mounted in said helicopter;

an airborne tank for containing water and/or alcohol disposed within said helicopter and an inlet for receiving water and/or alcohol from a ground source of water and/or alcohol;

data storage means and means for inputting a safe temperature profile for starting the helicopter turbine engine;

means for measuring the actual engine temperature during start up of a helicopter turbine engine;

means for sensing at least one critical operating parameter during flight operations;

comparison means for producing a signal when the actual engine temperature falls outside of the safe engine temperature profile during start up of the engine;

means for injecting water and/or alcohol into the helicopter engine during a start up procedure while maintaining said airborne tank full of water and/or alcohol;

means for disconnecting the supply of water and/or alcohol from the ground based source after completion of the start up procedure; and

means for injecting water and/or alcohol from said airborne tank into the turbine engine in response to an over-stress during flight operations.

12. (Original) A helicopter turbine engine over-stress protection system in accordance with Claim 11 in which said injection means automatically injects water and/or alcohol into said turbine engine in response to an engine over-stress during flight operations.

13. (Original) A helicopter turbine engine over-stress protection system in accordance with Claim 11 in which said inlet is separate from said airborne tank.

14. (Original) A helicopter turbine engine “hot start” prevention system comprising:

- a helicopter;
- a helicopter turbine engine mounted in said helicopter;
- means for selecting a first preselected temperature and a ten second transient temperature range;
- means for detecting a turbine outlet temperature of said engine;
- a source of water and/or alcohol for injection into said turbine engine;
- means for injecting water and/or alcohol from said source into said engine when said turbine outlet temperature exceeds said first preselected temperature; and
- means to abort said start up procedure if the turbine outlet temperature fails to fall below the ten second transient temperature range after injection of water and/or alcohol.